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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Donald Cowling

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EXAMINER

SHERWIN, RYAN W

ART UNIT

PAPER NUMBER

4133

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,338	Applicant(s) COWLING ET AL.	
	Examiner Ryan W. Sherwin	Art Unit 4133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/28/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show a complete representation of the prior art as described in the specification. Please include the cardboard separation stream in Figure 1 as any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several

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views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because Figure 2 is not obvious at first glance. Please label the transmitter and the receive module. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

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informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Multi-stage radio frequency identification process analysis system.

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The abstract of the disclosure is objected to because the abstract language reads more like claim language. Correction is required. See MPEP § 608.01(b).

7. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded

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hyperlink and/or other form of browser-executable code. See MPEP § 608.01. The two instances that require deleting are on page 1, line 24 and page 4, line 10.

8. The disclosure is objected to because of the following informalities: grammar concerns. Please change the word "it" to "if" on page 1, line 15. Please be consistent to say either "datalogger" or "data logger," instead of using them both throughout. The paragraph starting on page 2, line 23 reads like a claim, not like a specification.

Appropriate correction is required.

Claim Objections

9. Claim 10 objected to because of the following informalities: the term "analysing" should be spelled "analyzing" and the term "characterised" should be spelled as "characterized." Appropriate correction is required.

10. Claims 3-7, 9, 12, and 13 objected to because of the following informalities: unnecessary wording being crossed out. Please delete phrases being crossed out. Appropriate correction is required.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 10, 11, and 13 rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0133484 (Kreiner et al.).

With respect to claim 10, “a method of analysing a processing system characterised in that it comprises the steps of :

attaching to an item to be processed a Radio Frequency Identification (RFID) tag;” Kreiner et al. disclose that the RF tag may be embedded within the item or within an object attached to the item (such as, but not limited to, a label), applied to the surface of the item either directly or indirectly, attached to the item permanently or non-permanently, or otherwise suitably affixed to or associated with the item (Paragraph [0032]).

“reading information from the RFID tag using a first radio system associated with an input to the processing system as the item is passed into the input;” Kreiner further discloses that as the tagged item approaches the opening of the apparatus, the RF tag associated with the item is read by [a] reader (Paragraph [0071], Figure 6). Kreiner et

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al. state that the tag may be read when the item is brought into the processing facility, which could be the input of the system if you wish to determine the duration of the entire sorting process (Paragraph [0029]).

“reading information from the RFID tag using a second radio system associated with an output of the processing system as the item is passed from the output;” Kreiner et al. teach that separate receptacles for different composition items may each be equipped with an RF tag reader. As an RF-tagged item approaches the opening of the receptacle, the RF tag reader may read the RF tag associated with the item (Paragraph [0071]).

“passing information relating to the tag from the first and second radio systems to data logging means,” Kreiner et al. teach that the data retrieved from the RF tag is collected by an RF reader and stored in one or more datastores of information ... the data may be stored and processed on a computing device associated with the reader and/or transmitted to a host computer for storage and processing (Paragraph [0027]).

With respect to claim 11, “the method as claimed in claim 10 wherein the RFID tag is applied to an item to be passed through a waste product sorting facility,” Kreiner et al. disclose the RFID tag as seen above and continue to teach that information from the RF tag may be collected ... at a recycling, waste, or other facility (Paragraphs [0011] and [0029]).

With respect to claim 13, “a method as claimed in claim 10 wherein a third radio system is associated with a second output of the processing system, and the data logging means records at which output the RFID tag arrives after passing through the processing means,” Kreiner et al. disclose that separate receptacles for different composition items may each be equipped with an RF tag reader. As an RF-tagged item approaches the opening of the receptacle, the RF tag reader may read the RF tag associated with the item (Paragraph [0071]).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 1-6, 9, and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0133484 (Kreiner et al.) in view of U.S. Patent Application Publication No. 2002/0038228 (Waldorf et al.).

With respect to claim 1, Kreiner et al. disclose "a first radio system associated with an input part of a processing system, and a second radio system associated with an output part of the processing system" (Paragraph [0029]). Kreiner et al. continue to teach "a Radio Frequency Identification (RFID) tag associated with an item to be processed" (Paragraph [0022]). They then teach the "data logging means in communication with the first and second radio systems, wherein the first and second radio systems are arranged to communicate with the RFID tag as it passes through the processing system and to pass data associated therewith to the data logging means" (Paragraphs [0027], [0029], and [0031]).

Kreiner et al. do not explicitly disclose "a process analysis system...to record parameters associated with the processing system." Waldorf et al. teach of a system and method for analyzing processes (title and abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventions of Kreiner et al. and Waldorf et al. because, as Waldorf et al. understand, system analysis (including system processing time) can lead to an efficient business, cost savings, and strong customer relations (Paragraph [0003] and [0005]).

With respect to claim 2, Kreiner et al. teach that "the RFID tag is applied to an item to be passed through a waste product sorting facility" (Paragraphs [0022] and [0029]).

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With respect to claim 3, Kreiner et al. teach that “the RFID tag does not contain an internal power source, and is arranged, on interrogation from either the first or second radio systems, to transmit an identity code” (Paragraphs [0024], [0033], and [0035]).

With respect to claim 4, Kreiner et al. teach “the data logging means to record information... from the first radio system to the second radio system” (Paragraphs [0029] and [0055]).

However, they do not explicitly disclose that the information stored is “relating to the time interval taken for the RFID tag to pass” through the process.” Waldorf et al. disclose the recording of the start and stop times used to determine the duration of a process (Paragraph [0013]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Kreiner et al. using Waldorf et al. because, according to Waldorf et al., an improvement of process speed is always of interest (Paragraph [0005]).

With respect to claim 5, Kreiner et al. teach “a third radio system is associated with a second output of the processing system, and the data logging means is arranged to record at which output the RFID tag arrives after passing through the processing means” (Paragraphs [0048], [0055], and [0071]).

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With respect to claim 6, Kreiner et al. teach "the data logging means comprises a computer system" (Paragraphs [0027] and [0057]).

With respect to claim 9, Kreiner et al. teach "the data logging means arranged to calculate [information] ... associated with a tag and the data measured using the radio systems" (Paragraphs [0031], [0040], [0041], and [0068]).

Kreiner et al. do not expressly disclose "statistics pertaining to the processing system" are to be calculated. Waldorf et al. do teach of statistical analysis, however (Paragraph [0021]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Kreiner et al. because, as Waldorf et al. recognize, businesses continually look to improve their methods (Paragraph 0033)).

With respect to claim 12, Kreiner et al. disclose "the method as claimed in claim 10" as noted above (Paragraph [0013]).

Kreiner et al. do not explicitly teach that the "data logging means records information relating to the time interval taken for the RFID tag to pass from the first radio system to the second radio system." Waldorf et al. disclose the recording of the start and stop times used to determine the duration of a process (Paragraph [0013]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the

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invention of Kreiner et al. using Waldorf et al. because, according to Waldorf et al., an improvement of process speed is always of interest (Paragraph [0005]).

16. Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0133484 (Kreiner et al.) and U.S. Patent Application Publication No. 2002/0038228 (Waldorf et al.) as applied to claim 1 above, and further in view of U.S. Patent Application Publication No. 2001/0013830 (Garber et al.).

Kreiner et al. disclose the "process analysis system as claimed in claim 1."

However, Kreiner et al. do not expressly teach that "the RFID tag is able to store information written to it using a radio frequency field." Garber et al. do expressly teach of the radio frequency field (Paragraph [0029]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Kreiner et al. and Waldorf et al. using the invention of Garber et al. because Garber et al. state that RFID systems successfully identify all items in the interrogation zone without any intervention and that this is extremely important in inventory control, item tracking, and sorting (Paragraph [00042]).

17. Claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0133484 (Kreiner et al.) and U.S. Patent Application Publication No. 2002/0038228 (Waldorf et al.) and U.S. Patent Application Publication

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No. 2001/0013830 (Garber et al.) as applied to claim 7 above, and further in view of U.S. Patent No. 6,894,614 (Eckstein et al.).

Kreiner et al. disclose the "process analysis system as claimed in claim 7 ... [that] write[s] data to the RFID tag as it passes through the processing system" as seen above.

However, Kreiner et al. do not expressly disclose the use of a "transmitter." Eckstein et al. do expressly use a transmitter to send data to the tag (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Kreiner et al., Waldorf et al., and Garber et al. using the invention of Eckstein et al. because the use of RFID systems does not require alignment of the tag and reader to be detected and the tag is capable of storing necessary information (Column 2, line 52).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan W. Sherwin whose telephone number is (571) 270-7269. The examiner can normally be reached on Monday through Friday, 7:30 a.m. through 5:00 p.m., EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Abul Azad can be reached on (571) 272-7599. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ABUL AZAD/

Supervisory Patent Examiner, Art Unit 4133